Data Taking Statistics

Week of 2003 May 02-08

			Normalizable Luminosity (nb^{-1})			Hours			Norm. Events (k)		Efficiency	
Day	Date	Del	Util	Rec	Physics	Store	Util	Rec	Rec	Physics	Rec	Phys
Fri	2-May-03	1531.70	1502.22	1357.40	1357.40	18.2	17.8	17.1	2227	2227	0.886	0.886
Sat	3-May-03	1379.71	1320.17	1128.59	1128.59	15.0	14.4	13.7	2243	2147	0.818	0.818
Sun	4-May-03	1877.00	1826.75	1684.70	1684.70	20.7	20.2	19.7	3186	3186	0.898	0.898
Mon	5-May-03	1703.69	1684.86	1555.59	1555.59	21.4	21.1	20.6	2876	2876	0.913	0.913
Tue	6-May-03	905.95	880.60	766.21	766.21	10.6	10.3	9.7	1428	1428	0.846	0.846
Wed	7-May-03	818.33	791.57	673.44	673.44	8.1	7.8	7.2	1075	1075	0.823	0.823
Thu	8-May-03	1569.12	1551.70	1438.51	1438.51	19.2	19.0	18.5	2566	2566	0.917	0.917
		9785.5	9557.9	8604.4	8604.4	113.2	110.6	106.5	15601	15505	0.879	0.879

	Recorded Physics Lumi	Efficiency	Physics Events (million)
This Week	8.6 pb^{-1}	87.9%	15.5
Last Week	3.6 pb^{-1}	80.1%	8.1
Best Week (2003 May 02-08)	8.6 pb^{-1}	87.9%	15.5
Prior Best Week (2003 March 14-20)	5.8 pb^{-1}	84.9%	10.7

Delivered Luminosity Losses

Major Sources of Downtime & Deadtime (>0.15 hrs)

2-May-03	10:00	0.05	0.40	MTM Power Supply Trip L1 Crate x14
3-May-03	0:41	0.17	0.18	Begin Store 2503; Pixel Crate x32; L2 Disable Input
3-May-03	13:04	0.27	0.37	MTM Power Supply Trip L1 Crate x14
4-May-03	1:00	0.20	0.05	Operator Error: Download to non-existent FPD AFE
4-May-03	4:57	0.00	0.20	MDT Major Alarms Auto-pausing Run
4-May-03	17:46	0.15	0.00	Begin Store 2507; PDT 244; L2 Disable Input
5-May-03	5:50	0.20	0.00	Hot EM Tower affecting DAQ & Physics
5-May-03	22:42	0.00	0.20	SMT Crate Controller & Crate x65
6-May-03	1:40	0.10	0.40	Muon PDT Errors
7-May-03	16:12	0.20	0.25	Mezzanine Card in VRBC for FPS Crate x53
7-May-03	21:40	0.03	0.27	SMT HDI B2-5-08
8-May-03	17:29	0.13	0.07	FPS Readout Crate x53

Diagnosing PDT (and other Muon) Hardware/Electronic Failures, and subsequently disabling inputs to L1/L2 has gone much faster this week.
Nearly two complete stores without FPS Readout Crate x53.

Other Losses

- ~0.5 hr: 40 Run transitions (<1 minute/per)
- ~0.5 hr: 10 Begin or End Store transitions (~3 minutes/per)
- ~3 hrs: Average 5% FEB during physics data taking

Past Week of Stores

- 09:08 - 9 May 2003 Store 2529 - D0 Luminosity = 39.70E30. NEW
- 23:29 - 8 May 2003 End of Store 2523 - store abort due to lightning strike. NEW
- 13:26 - 8 May 2003 Store 2523 - D0 Luminosity = 39.78E30. NEW
- 09:10 - 8 May 2003 End of Store 2521 - terminated by the Tevatron.
- 15:55 - 7 May 2003 Store 2521 - D0 Luminosity = 37.63E30.
- 15:25 - 6 May 2003 End of Store 2511 - store lost due to BQ9 trip.
- 10:26 - 6 May 2003 Store 2511 - D0 Luminosity = 39.50E30.
- 05:44 - 6 May 2003 End of Store 2509 - terminated by the Tevatron.
- 13:20 - 5 May 2003 Store 2509 - D0 Luminosity = ~36.25E30.
- 10:46 - 5 May 2003 End of Store 2507 - terminated by the Tevatron.
- 17:46 - 4 May 2003 Store 2507 - D0 Luminosity = 36.00E30.
- 14:26 - 4 May 2003 End of Store 2505 - terminated by the Tevatron.
- 22:44 - 3 May 2003 Store 2505 - D0 Luminosity = 39.00E30.
- 14:23 - 3 May 2003 End of Store 2503 - terminated by the Tevatron.
- 00:30 - 3 May 2003 Store 2503 - D0 Luminosity = 37.70E30.
- 18:13 - 2 May 2003 End of Store 2502 declared by D0. Beam handed over to Tevatron for end of store studies.
- 00:04 - 2 May 2003 **Store 2502 - New Record Run II D0 Luminosity = 40.30E30.**

- **Previous Record was Store 2328 @39.50E30 at 08:47 20 March 2003**
- **Tevatron/CDF Luminosity for Store 2502: 42.35/44.40E30**

Best Stores

Best Store

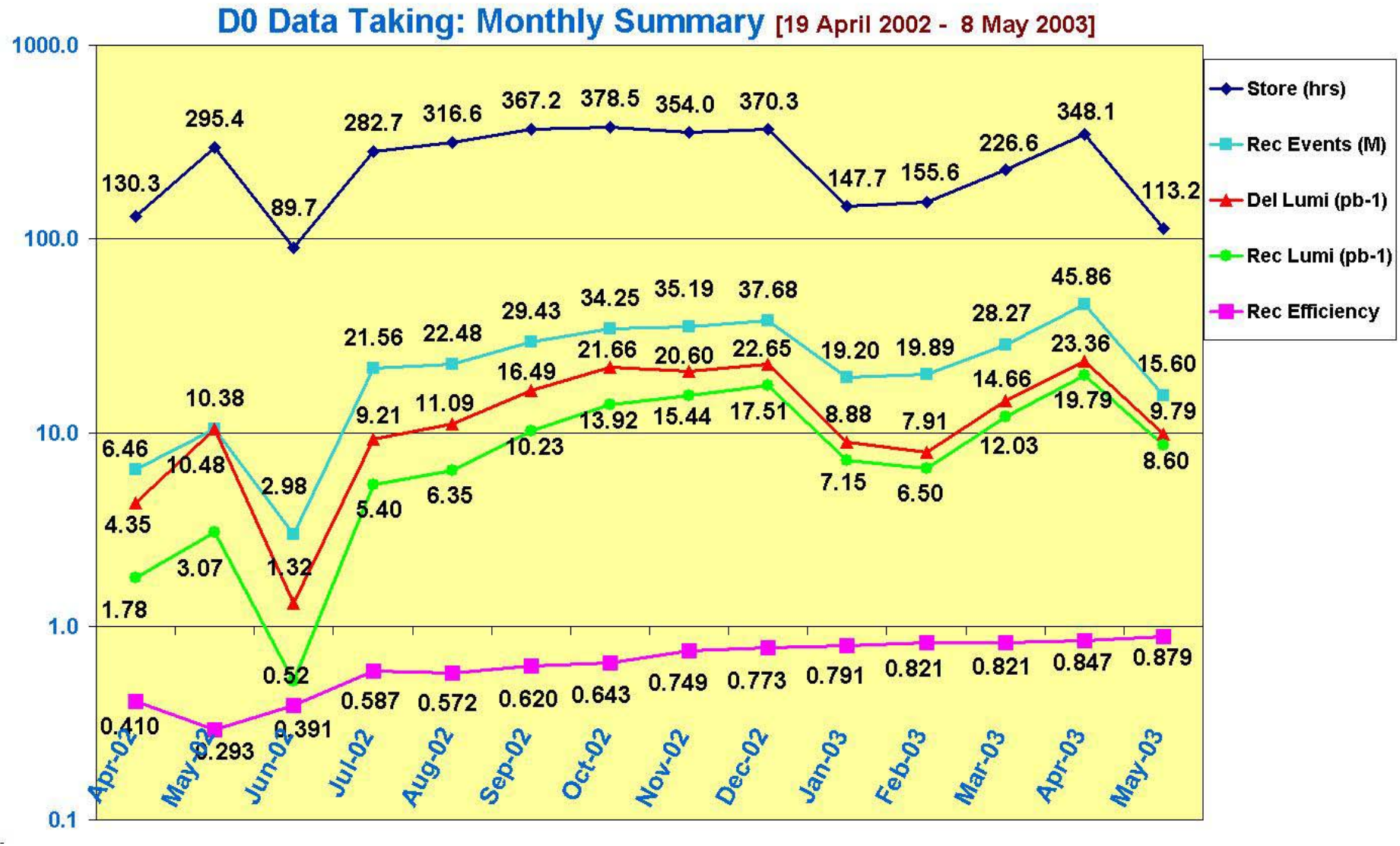
Sorted by Highest Initial D0 Luminosity greater than 3.50E31.

9 of the top 15 from the past week

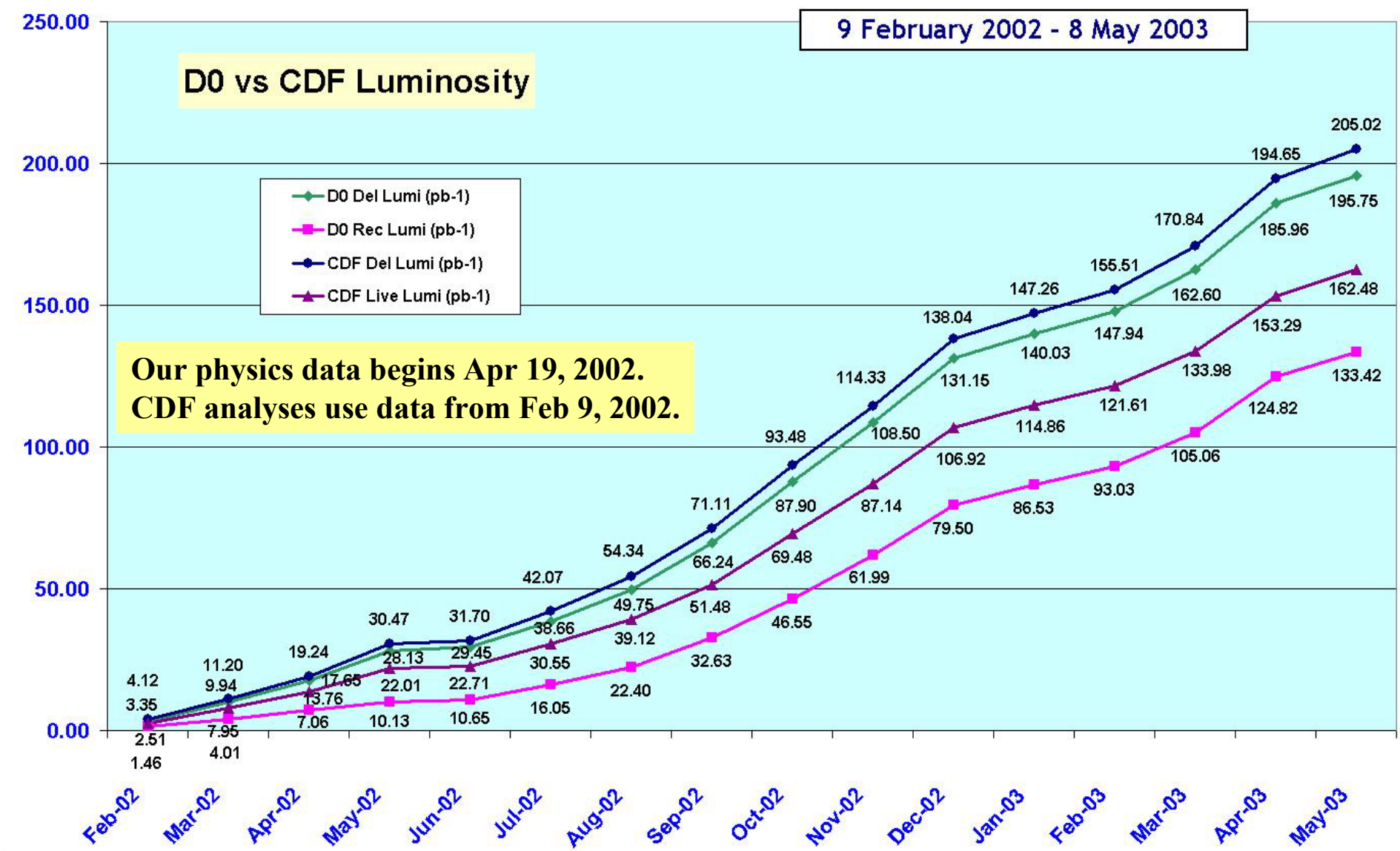
Initial Lumi (E31)	Store	Start Time	End Time
NEW 4.03	2502	2003 May 02 00:04	2003 May 02 18:13
NEW 3.98	2523	2003 May 08 13:26	2003 May 08 23:29
NEW 3.97	2529	2003 May 09 09:09	
NEW 3.95	2511	2003 May 06 10:26	2003 May 06 15:25
3.95	2328	2003 Mar 20 08:47	2003 Mar 21 04:10
3.91	2318	2003 Mar 16 08:10	2003 Mar 16 09:18
NEW 3.90	2505	2003 May 03 22:44	2003 May 04 14:26
NEW 3.77	2503	2003 May 03 00:30	2003 May 03 14:23
NEW 3.76	2521	2003 May 07 15:55	2003 May 09 09:10
3.67	2447	2003 Apr 21 14:07	2003 Apr 22 08:00
NEW 3.63	2509	2003 May 05 13:20	2003 May 06 05:44
3.62	2323	2003 Mar 18 05:03	2003 Mar 18 16:42
3.61	2426	2003 Apr 14 11:55	2003 Apr 14 13:48
NEW 3.60	2507	2003 May 04 17:46	2003 May 05 10:46
3.54	1953	2002 Nov 08 22:15	2002 Nov 09 20:32

Other News

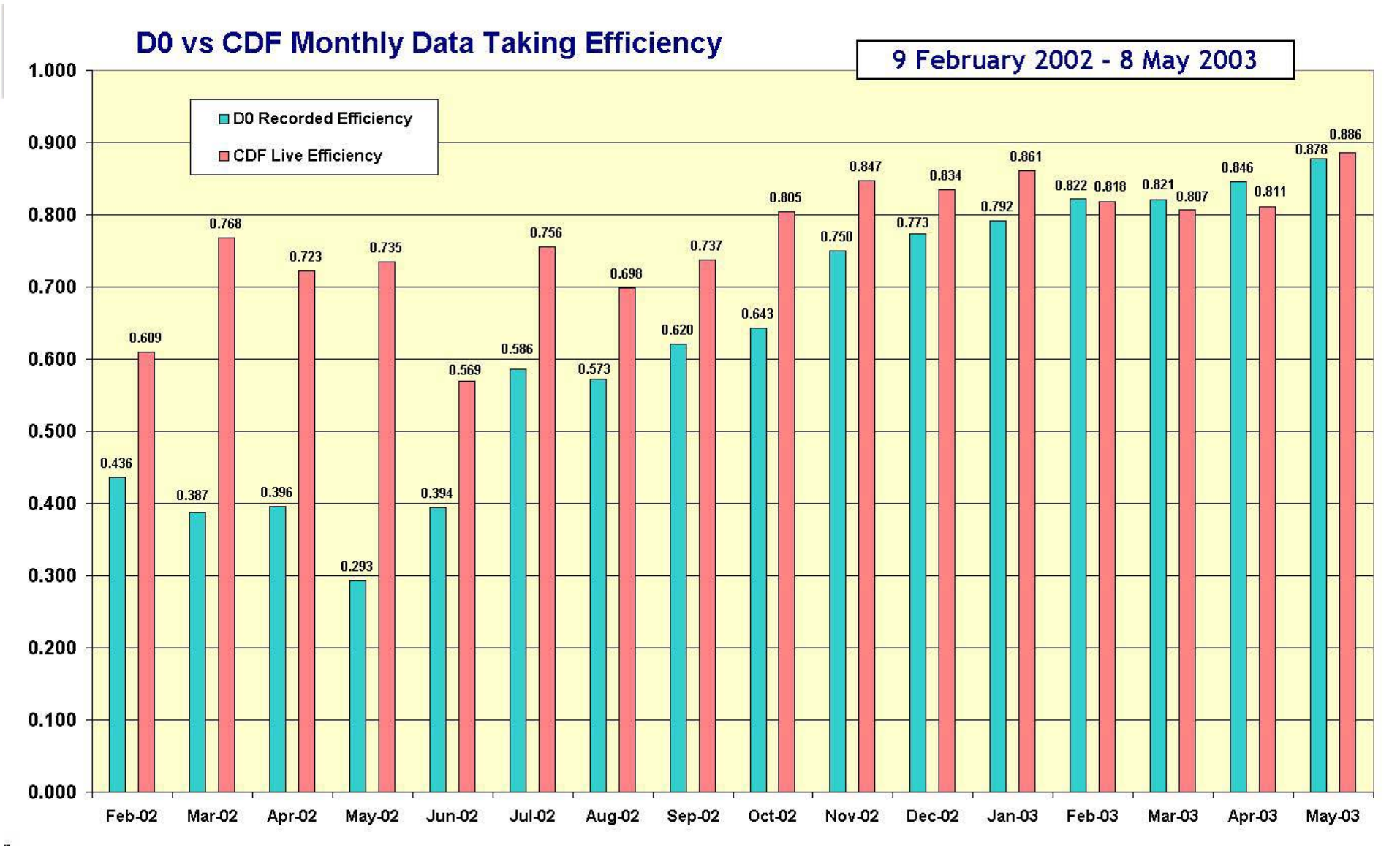
- FPD Shift Responsibilities are being transferred from the CAL Shifter to the Shift Captain
  - FPD Expert have provided simple instructions, and will spend time over the next few weeks with CAPs for individual training
  - This was done to facilitate the transition to single CAL/MUO Shift
- Continue with global_CMT-11.03 trigger list
  - L1/L2/L3 rates are capped at 1200/500/50 Hz
  - There is a strong effort from TB to move to v12
    - Decision will be made next week if we are prepared to make the change to v12 or stick with 11.03 through mid-June (data cut-off for summer conferences)
- No scheduled beam studies next week
  - Particle Accelerator Conference
  - Was mention of a _possible_ maintenance day next week
    - Would permit 8-12 hours access to collision halls/tunnel



- In this time period, we have 119 pb-1 & 292 Mevts of Physics
  - excluding "bad" Calorimeter sample from Jun 18-Aug 15 2002
  - but not correcting for Reco "losses" or bad runs (Muon, MET, etc.)



- By June 15 2003 we should have ~140 pb-1 & 350 Mevts of Physics
  - If an analysis requires silicon, → we already have better statistics than CDF


D0 vs CDF Monthly Data Taking Efficiency
9 February 2002 - 8 May 2003
D0 Recorded Efficiency
CDF Live Efficiency
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000
0.436
0.609
0.387
0.768
0.396
0.723
0.293
0.735
0.394
0.569
0.586
0.756
0.573
0.698
0.620
0.737
0.643
0.805
0.750
0.847
0.773
0.834
0.792
0.861
0.822
0.818
0.821
0.807
0.846
0.811
0.878
0.886
Feb-02
Mar-02
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02
Oct-02
Nov-02
Dec-02
Jan-03
Feb-03
Mar-03
Apr-03
May-03